

# Biogas to cut India gas import bills

PIONEER NEWS SERVICE ■ NEW DELHI

Replacing natural gas consumption with biogas and biomethane incrementally to 20 per cent by 2030 can help India cut liquefied natural gas import bills by \$29 billion between financial years 2025 and 2030, according to a new report from the Institute for Energy Economics and Financial Analysis (IEEFA).

It underscores the environmental advantages of expanding biogas projects, including waste management, reduction of greenhouse gas (GHG) emissions, and enhanced renewable energy production.

According to the report's author Purva Jain, an energy analyst at IEEFA, "Biogas has the potential to replace natural gas and other high-emission fossil fuels. By eliminating carbon dioxide (CO<sub>2</sub>) and impurities like hydrogen sulfide, its methane content can be upgraded to 90 per cent, making it calorifically equivalent to natural gas.

This upgraded biogas, known as biomethane, is pipeline-ready and can be integrated into gas grids as a non-fossil gas, she said.

"By adopting appropriate production methods and addressing methane leaks during production, upgrading, and supply stages, biogas can offer India a cleaner alternative to its reliance on imported natural gas," Jain said.

Despite its clear advantages, the biogas sector has struggled to gain traction in India. The report identifies several reasons for this, including the absence of a comprehensive market ecosystem, pricing challenges, complex approval processes, and fragmented government support.

Jain said the government has begun to



address these issues. In 2021, various types of support were consolidated under the National Bioenergy Scheme.

"Moreover, the introduction of the GOBARDhan (Galvanizing Organic Bio-Agro Resources Dhan) scheme as an umbrella initiative of the government will help in this consolidation. It covers the entire gamut of schemes/ policies promoting organic waste conversion to biogas or compressed biogas (CBG)," she says.

The report also highlights recent policy developments, such as revising the compressed biogas rate in response to global gas price increases and plans to mandate natural gas marketing companies to procure five per cent compressed biogas.

These measures have reignited private sector interest in compressed biogas, with companies like Reliance Industries Limited and the Adani Group showing strong enthusiasm.

However, the report emphasises that the government must do more to fully unlock biogas's potential in India. This includes encouraging increased investments and private sector involvement, improving market viability for CBG and biogas slurry, increasing financial access for biogas plant development, and promoting feedstock mapping for input availability.

Additionally, it is crucial to ensure that energy crops are not used for biogas, as this can lead to indirect land use changes, as seen with ethanol and biodiesel in Brazil, which can have a detrimental impact on climate and the environment through increased carbon emissions.

"A key step will be to guarantee the offtake of CBG by various natural gas-using industries to expedite the achievement of decarbonization goals. The introduction of take-or-pay arrangements will be a significant move in this direction," Jain said.

## MADE LARGE PROFITS IN PAST: PURI

# Govt hints at no fuel price hike

OMCs have capacity to absorb high crude costs, says oil minister

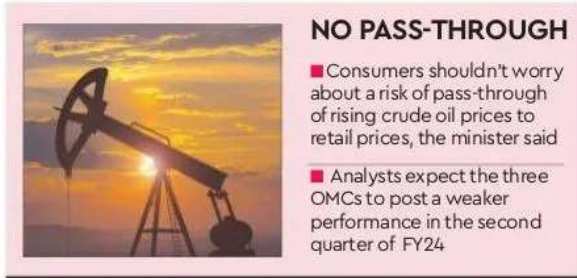
PRIYANSH VERMA &  
ARUNIMA BHARADWAJ  
New Delhi, October 26

**STATE-RUN OIL MARKETING** companies (OMCs) have the capacity to absorb the global crude price shocks as they have made large profits (in the previous quarters) due to high prices, Union minister for Petroleum and natural gas Hardeep Singh Puri told *FE* on Thursday.

Though it has been widely felt that OMCs, whose bottom lines are seen to have already taken a hit in Q2 FY24 and are looking at losses from auto fuels marketing in the current quarter, would still not hike retail fuel prices anytime soon. The minister's statement gives further credence to such perception.

For the record, retail fuel prices are market-determined.

"OMCs can absorb high prices and not (opt for) pass-through to retail consumers, as they have the capacity to do so...they made large profits in the past quarters when prices were lower," Puri said on the sidelines of an event



### NO PASS-THROUGH

■ Consumers shouldn't worry about a risk of pass-through of rising crude oil prices to retail prices, the minister said

■ Analysts expect the three OMCs to post a weaker performance in the second quarter of FY24

here. Consumers shouldn't worry about a risk of pass-through of rising crude oil prices to retail prices as the government has already cut the excise duty, the minister added.

In Q4 FY23 and Q1 FY24, OMCs posted large profits on the back of lower crude prices. However, crude prices started rising again by late September. In September, crude prices

reached their highest level at \$97 a barrel since November 2022, causing OMCs to face under-recoveries to the tune of ₹7/litre on the sale of petrol and diesel, said analysts.

The three OMCs – Indian Oil Corp (IOC), Hindustan Petroleum Corp (HPCL), Bharat Petroleum Corp (BPCL) – recorded a cumulative profit-after-tax (PAT) of approx ₹30,568 crore in

Q1 FY24 and ₹19,759 crore in Q4 FY23. In Q3 FY23, the cumulative PAT of the three OMCs was ₹2,580 crore. Whereas, in the two quarters prior to that, the OMCs posted a net loss in their earnings.

The price of India's crude oil basket had averaged \$109.50/bbl in Q1 FY23, and \$97.87/bbl in Q2 FY23. In Q3 and Q4 of the previous fiscal, it had averaged \$85.78/bbl and \$80.58/bbl. In Q1 FY24, India's crude oil basket's price averaged \$77.89/bbl and \$6.78/bbl in Q2. The composition of India's crude basket represents the average of Oman & Dubai for sour grades and Brent (dated) for sweet grade in the ratio of 76:24, according to the Petroleum Planning and Analysis Cell (PPAC) website. However, the share of Russian crude oil imports – which is largely Urals – in India's crude oil basket has increased sharply to about 80% in the recent months, which is not reflected on the PPAC website.

Analysts expect the three OMCs to post a weaker performance in Q2 FY24 due to lower marketing margins on the back of high crude oil prices. Price of crude oil could rise even further amid the possibility of escalating war between Israel and Gaza in the Middle East.



# India begins producing 'reference' fuel

*New Delhi:* India on Thursday began producing 'reference' petrol and diesel, joining a select league of nations that produce the highly specialised fuel which is used for testing automobiles.

Launching the fuel, Oil Minister Hardeep Singh Puri said the start of production of 'reference' fuel is another step towards Aatmanirbhar Bharat as it will end imports. These fuels, which have higher specifications, are critical for calibrating and testing by automobile manufacturers and testing agencies. For decades, India has relied on imports to meet the demand for these fuels. **PTI**





## India launches reference fuel

**INDIA ON** Thursday launched its first reference fuel in collaboration with state-run IOC, becoming the third country to do so. The domestic production is likely to reduce India's import

dependency.

The imported reference fuel will costs ₹800-850 a litre. Indigenous production of this fuel will cut down this cost to around ₹500 perlitre. — **FE BUREAU**

# India needs both e-vehicles and biofuels

E-vehicle adoption needs changes in building bye-laws and huge charging infra. Complementing with biofuels is pragmatic

**Sanjib Pohit**  
**Anupma Mehta**

**G**iven that vehicles are the biggest culprits for polluting Delhi, the government has launched a stringent drive against polluting vehicles this year, through measures such as banning petrol and diesel vehicles older than 15 years and 10 years, respectively; promoting e-vehicles; and the deployment of nearly 400 teams on Delhi's roads to check the vehicles' pollution certificates and prevent the plying of over-age cars.

The most far-reaching move is, however, the push for the widespread adoption of electric vehicles. The Ministry of Road Transport and Highways has announced a policy of EV30@2030, where by 2030 30 per cent of the newly registered private cars, 40 per cent of buses, 70 per cent of commercial vehicles, and 80 per cent of two- and three-wheelers will be electric vehicles.

## THE CHALLENGES

But the chief of The Energy Resource

Institute (TERI), Ajay Mathur contends that the target to switch to e-vehicles within the next 10 years is hard to achieve as the vehicle market is consumer-driven, and ensuring acceptability and desirability among consumers is vital.

The other challenges include affordability concerns stemming from high battery costs; limited facilities for building a robust battery manufacturing ecosystem; lack of a consistent policy framework for e-vehicles; and high charging times and inadequate availability of charging stations for such vehicles, especially in space-constrained urban areas like Delhi.

Experts point out that providing dedicated charging stations for every e-vehicle in cities would necessitate re-engineering of building laws and widespread construction of multi-level parking lots across the entire urban landscape.

The introduction of e-vehicles thus needs to be implemented in a graded fashion in tandem with other feasible options.

The replacement of fossil fuels with biofuels, for instance, can not only



**BLENDING.** Green initiatives /ISTOCKPHOTO

counter environmental pollution but is also a more affordable alternative to the rapid adoption of e-vehicles. Since biofuels are generated from renewable stocks, their production and use could be sustained indefinitely, unlike fossil fuels that come with expiry dates.

Moreover, since ethanol-based biofuels can be produced domestically on a large scale, their introduction into the vehicle manufacturing ecosystem would also bring down overall costs, reduce the need for oil imports, and enable the country to better deal with the adverse impacts of global supply disruptions in oil and gas.

Biofuels derived from waste and farm residue can also re-energise the rural economy and augment farmers' incomes. In this context, recent policy efforts to promote biofuel production are already showing results. According to Government sources, the target of 10 per cent ethanol blending for 2022 was achieved comfortably, leading to notable savings in forex outflows.

Hence, combating the scourge of air pollution and vehicular emissions warrants the twin strategies of pragmatic introduction of e-vehicles on roads coupled with changes in building bye-laws and making charging infrastructure compulsory for large real estate (residential/commercial) project, and promoting greater use of biofuels to eventually phase out conventional polluting fuels. Both measures require policy interventions for creating appropriate infrastructures and investments in research and development to help achieve India's net zero and decarbonisation goals.

Pohit is Professor and Mehta is Head of Publications and Senior Editor at NCAER. Views expressed are personal.

## India's Vostok plan slows as US firms skip Russia

Rituraj Baruah & Utpal Bhaskar

NEW DELHI

India's plans to invest in a massive Rosneft project in Vostok have stalled as American consultants who conduct third-party studies and due diligence stay off the sanctions-hit Russian Federation, two officials aware of the development said.

In November 2021, *Mint* reported about a consortium of state-run firms—ONGC Videsh Ltd (OVL), Indian Oil Corp. Ltd (IOCL) and Oil India Ltd (OIL)—completing the technical evaluation of 30 out of 52 licence areas of the Vostok project. India is also looking to invest in Russia's liquefied natural gas (LNG) project, Arctic LNG-2, by purchasing a stake from Novatek. The transactions hold importance for India, the world's third-largest oil buyer.

With an estimated reserve of about 6 billion tonnes of crude oil and expected production of 100 million tonnes (mt) in 2030, Vostok is part of a multi-pronged energy partnership between India and Russia. It is the largest greenfield oil and gas project in the world and comprises 52 licence areas with 13 oil and gas fields, including Vankor, Suzunskoye, Tagul-

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# India's Vostok plan slows as US firms skip sanctions-hit Russia

FROM PAGE 1

skoye, Lodochnoye, Payakh-skoye and Zapadno-Irkinskoye.

"We have been exploring investing in other assets in Russia, but there are problems on account of the unavailability of consultants to do due diligence there. Most of the consultants who do third-party studies are US-based," said one of the two people on condition of anonymity.

A top government official said: "These are discussions going on for a long time. Whenever you want to register forward movement on these transactions, you need, first of all, a valuation. We have done a fair amount of acquisitions over the years. They will increase going ahead. But, whenever a country is in a war-like situation, the transactions become more difficult. For us, it is a good thing now that if we are getting a good asset somewhere, we should buy it anywhere in the world."

Indian state-owned firms have invested \$16 billion in Russia, including in the Far East and East Siberia, in oil and gas assets



Indian state-owned firms have invested \$16 billion in Russia. AP

such as Sakhalin-1, Vankor and Taas-Yuryakh. While OVL owns a 20% stake in the Sakhalin-1 hydrocarbon block, a consortium of OVL, OIL, IOCL and Bharat PetroResources Ltd owns 49.9% in Rosneft's unit CSJC Vankorneft.

Another consortium comprising OIL, IOCL and Bharat PetroResources owns 29.9% of LLC Taas-Yuryakh.

However, the repatriation of around \$600 million in dividends stuck in Russia due to Western sanctions on Russian energy companies remains a challenge. On 10 September, *Mint* reported that OIL hired

legal and tax consultants to explore ways to repatriate its \$150 million in dividends stuck in Russia.

Separately, the US treasury department's Office of Foreign Assets Control (OFAC) has sought details of Russian oil purchases, including those by Indian entities, in the last few months.

Queries emailed to spokespeople for Rosneft, OVL, IOCL, OIL, and India's petroleum and natural gas ministry on 17 August remained unanswered.

Russia has emerged as the largest supplier of oil to India in the past 20 months with offers of discounted oil amid sanctions from the West in reprisal for its invasion of Ukraine. Russia continued to be the largest oil supplier to India in August, with imports worth \$4.15 billion, according to data from the commerce ministry. In 2021-22, Russian oil accounted for only 2% of India's total oil imports; in 2022-23, it made up around one-fourth of the 235.52 million tonnes of crude oil imported by India. It now stands at 39%.

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# Natgas Consumption Rises 7% in First Half

Oilmin says demand up at 32.6 BCM in April-September

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**New Delhi:** India's natural gas consumption rebounded 7% year-on-year in the fiscal first half, reversing a decline last year, as international gas prices and supplies normalised.

Consumption rose to 32.6 billion cubic meters (BCM) in the April-September period, according to oil ministry data. For the full year ended March 31, consumption stood at 60 BCM, nearly the same level as in 2018-19.

Gas consumption rose 5% in 2019-20 before falling by a similar percentage point the subsequent year as the pandemic curtailed demand. It expanded 5% in 2021-22, boosted by the post-pandemic recovery but fell by a similar volume again in the succeeding year, weighed down by record high prices in the international markets.

Japan Korea Marker (JKM), the liquefied natural gas (LNG) spot market benchmark for North Asia, surged to nearly \$70 per MMBtu in August 2022 but has since plummeted to around \$18. Most of India's long-term contracts for LNG imports are benchmarked to crude oil, which has also been more stable than last year.

The current stability in the global gas and crude markets has brought some confidence among Indian consumers, boosting consumption, an industry executive said, adding that a further drop in prices can lead to even greater demand. LNG imports have



expanded 9% on-year in the April-September period.

Long-term LNG imports from a key supplier were disrupted last year following the start of the Ukraine war. That has since resumed, increasing supplies for domestic consumers.

A 4% rise in domestic production of natural gas, which has traditionally been cheaper than imported fuel, has also aided local consumption. India imports about 46% of the gas it consumes.

A change in policies, which made locally produced gas more affordable while increasing its allocation to city gas distributors, also helped drive consumption. This allowed city gas distributors to reduce their intake of expensive LNG and offer cheaper domestic gas to CNG vehicle drivers.

This year's demand expansion has come mainly from power plants, city gas distributors, and refineries. Refineries, which account for about 8% of India's total gas consumption, increased their consumption by 28% this year. Spiralling prices last year prompted refiners as well as many other industries to switch to liquid fuel.

Meanwhile, rising electricity demand has boosted gas use in power generation by 18% year-on-year. The power sector accounts for 14% of India's natural gas consumption.



# ONGC revolutionises water management in North Gujarat

**NEW DELHI:** In response to the pressing issue of water scarcity in North Gujarat, Energy Maharatna ONGC has successfully executed a groundbreaking project to make potable water from waste water released by its Effluent Treatment Plants (ETP). This successful pilot not only ensures the availability of clean water for industrial and agricultural purposes but also marks a significant milestone in the preservation of vital water resources in the water-starved region.

With water scarcity emerging as a growing concern in North Gujarat, ONGC made this commendable effort to turn the tide in favor of the local community. The ONGC facility at the North Santhal (NS) ETP is now capable of producing an



**Mehsana MP Shardaben Patel with ONGC Mehsana Asset Manager Sudip Gupta**

impressive 500 cubic meters of treated water per day, equivalent to five lakh liters, suitable for consumption.

This project is part of ONGC's commitment to ensure

the prosperity of the region and preserving its natural resources. The Maharatna has undertaken a total of five such facilities on a pilot basis, with the NS ETP facility being the first to be com-

**With water scarcity emerging as a growing concern in North Gujarat, ONGC made this commendable effort to turn the tide in favor of the local community**

missioned. ONGC is taking proactive steps to ensure that the benefits of this initiative reach the grassroots level, enhancing lives and conserving precious water resources in the water-parched North Gujarat.

Member of Parliament (Lok Sabha) from Mehsana, Sharda-

ben Patel recently paid a visit to the NS ETP facility, accompanied by High Power Committee members, including representatives from the farming community. During her visit, the MP interacted with the dedicated operational team of this transformative project. The MP expressed her deep appreciation for ONGC's dedicated efforts and commitment to addressing the water scarcity issue in North Gujarat.

ONGC is determined to continue its mission of making a positive impact in the lives of the people in North Gujarat and beyond. ONGC remains committed to sustainable practices and endeavors to secure a better future for all through innovative projects like the one at the NS ETP.

MPOST



## **OVL eyes \$413mn dividend recovery in Venezuela**

TIMES NEWS NETWORK

**New Delhi:** Easing of US sanctions on Venezuela has raised hopes of state-run ONGC Videsh (OVL) recovering some \$413 million dividend from the San Cristobal oilfield in the South American country, people in the know said on Thursday.

OVL holds 40% stake in the field in eastern Venezuela's Orinoco heavy oil belt. It is operated jointly by ONGC Videsh and Venezuela's national oil company PdVSA (Petróleos de Venezuela SA). OVL and PdVSA had in November 2016 signed two agreements for re-development of the project.



# OVL may hold Russia assets via new arm in GIFT City

Firm's \$100 mn dividends held due to sanctions

PRASANTA SAHU  
New Delhi, October 26

**STATE-RUN ONGC VIDESH (OVL)** may incorporate a subsidiary in the GIFT International Financial Services Centre in Gujarat soon to hold its Russian oil assets.

The move follows the inability of OVL's Singapore holding arm to receive dividends from the oil assets due to the sanctions on Russia. Including Russia, OVL owns participating interests in 32 oil and gas assets in 15 countries.

OVL did not respond to email queries sent to the company.

The outbreak of the Russia-Ukraine war last year created a fresh round of headwinds for OVL, which a section of the government feels has not been able to reap the benefits of its substantial holdings in oil assets overseas.

With Russia nationalising oil output from the Sakhalin-I oil field after the Ukraine war, OVL is just a dividend-receiving shareholder compared to the earlier practice of getting a share in oil output equivalent to its shareholding (equity oil), an official said. Even then, it would receive fresh dividends only after meeting some conditions.

Around \$100 million in dividends from the previous year are held up in Russia as Singapore did not permit the remittance of the money to OVL's Singapore firm, which holds the Russian assets. OVL set up the Singapore arm due to tax arbitrage as taxes are high



## IMPACT OF WAR

■ Including Russia, OVL owns participating interests in 32 oil and gas assets in 15 countries

■ OVL set up the Singapore arm due to tax arbitrage as taxes are high in India

■ The outbreak of the Russia-Ukraine war last year created a fresh round of headwinds for OVL, which a section of the government feels has not been able to reap the benefits

in India (15-30% plus cess and surcharge depending on equity holding in overseas company). In Singapore, the tax on dividend income could be zero.

Meanwhile, *Reuters* reported on Thursday that ONGC hopes to recover over \$500 million in dividends pending since 2014 for its

stake in Venezuelan projects held through OVL as sanctions on the nation were eased.

The Biden administration on Wednesday eased sanctions on Venezuela's oil sector after the government and opposition parties reached a deal for the 2024 election, in the most extensive rollback of Trump-era restrictions on Caracas.

With GIFT IFSC, India's answer to global financial centres such as Singapore, officials said OVL is looking at setting up a company in the IFSC to manage overseas assets, especially Russian assets. GIFT IFSC, which is treated as a foreign jurisdiction for taxation purposes, offers a host of direct and indirect tax incentives to companies set up there, an official said.

OVL acquired 20% stake in the project in Sakhalin-I in July 2001. Other partners were, operator Exxon Neftegas (ENL) with 30% stake; SODECO, a consortium of Japanese companies at 30% and Subsidiaries of Rosneft, the Russian National Oil Company at 20%. Sakhalin-1 started 2022-23 by producing about 210,000 barrels of oil per day (BOPD) in accordance with the planned production profile.

However, following the Russia-Ukraine conflict, Operator ENL started significant production curtailment and declared *force majeure* on April 21, 2022. Production became close to zero in September 2022.

Russia issued a Presidential Decree on October 07, 2022 transferring all rights & obligations of Sakhalin-1 Consortium to a newly formed entity Sakhalin-1 Limited Liability Company (Sakhalin-LLC).



# The strategic pivot to clean energy sources

Compressed biogas could trim India's import expenditure by as much as \$20 to \$25 billion, suggests Dr Piyush Dwivedi, chairman of clean fuel energy company, Nexgen Energia Ltd

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**Prime Minister** Narendra Modi's launch of the 'Global Biofuel Alliance' at the recent G20 summit represents a significant stride toward a sustainable and economically robust energy future for India. This move was warmly welcomed by stakeholders across the board, as it holds the potential to revolutionise India's energy sector, reducing its massive energy bill and contributing significantly to the creation of a circular economy.

At the heart of this initiative is the promotion of biofuels, which are poised to play a pivotal role in reshaping India's energy future. Compressed biogas (CBG), in particular, has emerged as a game-changer. Dr Piyush Dwivedi, chairman, Nexgen Energia Ltd, believes that CBG could trim India's import expenditure by as much as \$20 to \$25 billion.

## Sunrise sector

This enthusiasm for biofuels is bolstered by the tremendous growth potential of the biomass market in India, which is projected to reach a staggering ₹32,000 crore by 2030. The annual availability of biomass stands at around 750 million metric tonnes, presenting a significant opportunity for India to meet its energy needs sustainably.

Various state governments have taken proactive measures to encourage the establishment of CBG plants,

bio-coal plants and similar ventures. The Uttar Pradesh government has formulated a forward-thinking bioenergy policy that offers production-based incentives of approximately ₹75 lakh per tonne for CBG

plants and subsidies for the procurement of essential equipment. These policies are designed to stimulate investment and innovation in the clean energy sector, setting the stage for India's transition to sustainable fuels.

One pioneering company at the forefront of this energy revolution is Nexgen Energia. They have embarked on an ambitious

mission to establish 1,000 biogas plants by 2030 and plan on breaking ground on approximately 30 plants across India by the end of 2023. Five of these plants are already in advanced stages of construction.

Nexgen Energia's vision, however, extends beyond the mere establishment of biogas plants. They are committed to creating a holistic ecosystem by setting up biogas retail pumps and facilitating the direct sale

of CBG to consumers. They plan to establish 500 such pumps by 2025, making CBG readily accessible to the masses.

The benefits of CBG extend beyond being a clean fuel source; it also serves as a catalyst for the generation of valuable derivatives such as hydrogen and methanol. In alignment with Prime Minister Modi's vision of making India energy independent, Nexgen Energia has actively begun working on plans to develop hydrogen production facilities.

**Prime Minister Narendra Modi's vision of making India energy independent positions the country as a global leader in the fight against climate change, heralding a historic moment in India's energy transition**



**Dr Piyush Dwivedi,**  
chairman,  
Nexgen Energia Ltd



# We have achieved 12% ethanol blending target for 2022-23: Oil Minister HS Puri

**Our Bureau**  
New Delhi

India has achieved the target of blending 12 per cent ethanol with petrol during the current ethanol supply year, which concludes in October 2023, Oil Minister HS Puri said on Thursday.

In ESY 2022-23 (December 2022–October 2023), the government had set a target of achieving 12 per cent ethanol blending with petrol. The target for next year — ESY 2023-24 (November 2023–October 2024) — is 15 per cent.

“(Oil) Secretary Pankaj Jain told me that we have already done 12 per cent this month, which was our target, and we are well towards reaching our target of 20 per cent biofuel blending by the calendar year 2025,” Puri said while launching reference fuels produced by Indian Oil Corporation (IOC).

Several advancements, such as the expedited implementation of fuel blending, moving the ambitious target of achieving 20 per cent



**IN THE ELITE LEAGUE.** Union Minister for Petroleum & Natural Gas, Hardeep Singh Puri, at the launch of India's first reference fuel, in New Delhi on Thursday PTI

blending from 2030 to 2025, and the sale of E20 blended fuel at over 5,000 petrol outlets, are a significant step in reducing emissions, he added.

The Minister noted that, apart from interest in producing ethanol from sugar-based producers, the maize industry is equally keen.

“I think the rate of use of maize is so high that it is impressive. Today, meeting blending targets for biofuels

is not an anxiety point. By the end of the 2025 calendar year, 20 per cent blending will be easily done,” he noted.

The percentage of ethanol blended with petrol by the oil marketing companies (OMCs) had declined to 11.72 per cent in August this year from 11.77 per cent in July on account of a lack of availability of feedstock such as rice. The Ministry of Petroleum and Natural Gas

(MoPNG) attributed the decline in blending to the discontinuation of Food Corporation of India (FCI) rice from July 2023.

It led to a spike in the prices of feedstock, which are domestic food grains (DFG) and maize in the market. This resulted in reduced supplies of grain-based ethanol by 2.5 to 3-crore litres per week. Lack of supplies too impacted the functioning of grain-based distilleries, with operations halted for more than a month.

For the ESY 2022-23, the oil marketing companies (OMCs) floated a tender for 599.7 crore litres of ethanol, against which letters of intent (LoIs) for 564.45 crore litres were issued as of August 2023.

## REFERENCE FUELS

The indigenously developed product by Indian Oil meets Automotive Industry Standard (AIS) specifications, substitutes imports, and is available at a better price with reduced lead time. Puri commended the efforts by the IOC's R&D team for indigen-

ously producing reference fuels, which are used for the calibration and testing of vehicles by automobile manufacturers and testing agencies such as the International Centre for Automotive Technology (ICAT) and the Automotive Research Association of India (ARAI).

Reference fuels (gasoline and diesel) are premium high-value products, and their demand in India is currently met by importing from other countries.

“The consumption of reference fuels, as they are specialised fuels, is around 150 kilo litres annually. The IOC has started making it. So we are importing 150 kilo litres, which will now stop. Globally, there are only three companies that make reference fuels. My assessment is that once we complete this project, India will become a major exporter of reference fuels. First, we are looking at meeting our requirements and slowly but surely going in the direction of meeting regional requirements,” the minister said.

# एलएनजी आयात बिल घटा सकता है भारत

■ बायोगैस के जरिए इसमें लाई जा सकती है 29 अरब डालर तक की कमी

नई दिल्ली (भाषा)।

प्राकृतिक गैस की जगह बायोगैस और बायोमीथेन की खपत वर्ष 2030 तक 20 प्रतिशत बढ़ाने से भारत को अपने तरलीकृत प्राकृतिक गैस (एलएनजी) के आयात बिल में वित्त वर्ष 2024-25 से 2029-30 के बीच 29 अरब अमेरिकी डालर की कमी करने में मदद मिल सकती है। एक नई रिपोर्ट में यह दावा किया गया है।

इंस्टिट्यूट फॉर एनर्जी इकनॉमिक्स एंड फाइनेंशियल एनालिसिस (आईईईएफए) की रिपोर्ट में अपशिष्ट प्रबंधन, ग्रीनहाउस गैस (जीएचजी) उत्सर्जन में कमी और नवीकरणीय ऊर्जा के उत्पादन में वृद्धि सहित विस्तारित

बायोगैस परियोजनाओं के पर्यावरणीय लाभ को रेखांकित किया गया है।

रिपोर्ट की लेखिका और आईईईएफए में ऊर्जा विश्लेषक पूर्वा जैन के अनुसार, 'बायोगैस में प्राकृतिक गैस और अन्य उच्च उत्सर्जन वाले जीवाश्म ईंधन की जगह लेने की क्षमता है। कार्बन डाइऑक्साइड और हाइड्रोजन सल्फाइड जैसी अशुद्धियों को खत्म करके, इसकी मिथेन सामग्री को 90 प्रतिशत तक उन्नत किया जा सकता है जिससे यह कैलोरी के लिहाज से प्राकृतिक गैस के बराबर हो जाती है।'





# जीवाश्म ईंधन पर निर्भरता घटा आयात बिल में 29 अरब डॉलर की कटौती कर सकता है भारत

नई दिल्ली। प्राकृतिक गैस की जगह बायोगैस और बायोमीथेन की खपत 2030 तक 20 फीसदी बढ़ाने से भारत को अपने तरलीकृत प्राकृतिक गैस (एलएनजी) के आयात बिल में 2024-25 से 2029-30 के बीच 29 अरब डॉलर की कमी करने में मदद मिल सकती है।

इंस्टीट्यूट फॉर एनर्जी इकनॉमिक्स एंड फाइनेंशियल एनालिसिस (आईईईएफ) की रिपोर्ट में कहा गया है कि कचरा प्रबंधन, ग्रीनहाउस गैस के उत्सर्जन में कमी और नवीकरणीय ऊर्जा के उत्पादन में वृद्धि सहित बायोगैस परियोजनाओं के विस्तार से पर्यावरण संबंधी लाभ मिलेगा। आईईईएफ में ऊर्जा

## संघर्ष से बायोगैस क्षेत्र को मिली लोकप्रियता



जैन ने कहा कि उत्पादन की उचित विधि अपनाकर और उत्पादन के दौरान मीथेन गैस के रिसाव को दूर कर आपूर्ति के स्तर पर उन्नत बायोगैस देश को ईंधन का एक स्वच्छ विकल्प प्रदान कर सकती है। इसके लिए अभी हम आयातित प्राकृतिक गैस पर निर्भर हैं। स्पष्ट लाभ के बावजूद बायोगैस क्षेत्र को भारत में जगह बनाने के लिए संघर्ष करना पड़ा है।

विश्लेषक पूर्वा जैन ने कहा, बायोगैस में प्राकृतिक गैस व अन्य उच्च उत्सर्जन वाले जीवाश्म ईंधन की जगह लेने की क्षमता है। कार्बन डाइऑक्साइड और हाइड्रोजन सल्फाइड जैसी अशुद्धियां खत्म कर इसकी मीथेन सामग्री को 90 फीसदी तक उन्नत कर सकते हैं। इससे यह कैलोरी के लिहाज से प्राकृतिक गैस के बराबर हो जाती है। एजेंसी

## सरकार को पूरी क्षमता के लिए करने होंगे प्रयास

सरकार की नीतियों से बायोगैस में निजी क्षेत्र की रुचि फिर से जगी है। रिलायंस इंडस्ट्रीज और अदाणी समूह जैसी कंपनियों ने मजबूत उत्साह दिखाया है। रिपोर्ट में इस बात पर जोर दिया गया है कि सरकार को भारत में बायोगैस क्षमता का पूरी तरह से दोहन के लिए और अधिक प्रयास करने होंगे। इनमें अधिक निवेश व निजी क्षेत्र की भागीदारी को प्रोत्साहन देना, बायोगैस से जुड़ी बाजार व्यवहार्यता में सुधार करना, बायोगैस संयंत्र विकास के लिए वित्तीय पहुंच बढ़ाना शामिल है।

# जीवाश्म ईंधन पर निर्भरता घटा आयात बिल में 29 अरब डॉलर की कटौती कर सकता है भारत

नई दिल्ली। प्राकृतिक गैस की जगह बायोगैस और बायोमीथेन की खपत 2030 तक 20 फीसदी बढ़ाने से भारत को अपने तरलीकृत प्राकृतिक गैस (एलएनजी) के आयात बिल में 2024-25 से 2029-30 के बीच 29 अरब डॉलर की कमी करने में मदद मिल सकती है।

इंस्टीट्यूट फॉर एनर्जी इकॉनॉमिक्स एंड फाइनेंशियल एनालिसिस (आईईएफए) की रिपोर्ट में कहा गया है कि कचरा प्रबंधन, ग्रीनहाउस गैस के उत्सर्जन में कमी और नवीकरणीय ऊर्जा के उत्पादन में वृद्धि सहित बायोगैस परियोजनाओं के विस्तार से पर्यावरण संबंधी लाभ मिलेगा। आईईएफए में ऊर्जा

## संघर्ष से बायोगैस क्षेत्र को मिली लोकप्रियता



लिए अभी हम आयातित प्राकृतिक गैस पर निर्भर हैं। स्पष्ट लाभ के बावजूद बायोगैस क्षेत्र को भारत में जगह बनाने के लिए संघर्ष करना पड़ा है।

विश्लेषक पूर्वा जैन ने कहा, बायोगैस में प्राकृतिक गैस व अन्य उच्च उत्सर्जन वाले जीवाश्म ईंधन की जगह लेने की क्षमता है। कार्बन डाइऑक्साइड और हाइड्रोजन सल्फाइड जैसी अशुद्धियां खत्म कर इसकी मिथेन सामग्री को 90 फीसदी तक उन्नत कर सकते हैं। इससे यह कैलोरी के लिहाज से प्राकृतिक गैस के बराबर हो जाती है। एजेंसी

## सरकार को पूरी क्षमता के लिए करने होंगे प्रयास

सरकार की नीतियों से बायोगैस में निजी क्षेत्र की रुचि फिर से जगी है। रिलायंस इंडस्ट्रीज और अदाणी समूह जैसी कंपनियों ने मजबूत उत्साह दिखाया है। रिपोर्ट में इस बात पर जोर दिया गया है कि सरकार को भारत में बायोगैस क्षमता का पूरी तरह से दोहन के लिए और अधिक प्रयास करने होंगे। इनमें अधिक निवेश व निजी क्षेत्र को भागीदारी को प्रोत्साहन देना, बायोगैस से जुड़ी बाजार व्यवहार्यता में सुधार करना, बायोगैस संयंत्र विकास के लिए वित्तीय पहुंच बढ़ाना शामिल है।



### देश में पहली बार रेफरेंस

#### फ्यूल्स लांच

नई दिल्ली। पेट्रोलियम एवं प्राकृतिक गैस मंत्री हरदीप सिंह पुरी ने देश में पहली बार रेफरेंस फ्यूल्स को लांच किया। इसके उत्पादन से भारत के आत्मनिर्भर दृष्टिकोण को बढ़ावा मिलेगा। यह रेफरेंस फ्यूल्स इंडियन ऑयल के अनुसंधान एवं विकास केंद्र में उत्पादित किया गया है। इंडियन ऑयल के पारादीप और पानीपत रिफाइनरियों में इसका उत्पादन एक बड़ी उपलब्धि है। पुरी बृहस्पतिवार को भारत में पहली बार इंडियन ऑयल द्वारा उत्पादित 'रेफरेंस गैसोलिन और डीजल ईंधन' के लांच के अवसर पर बोल रहे थे। इस अवसर पर पंकज जैन और इंडियन ऑयल के अध्यक्ष एसएम वैद्य भी कार्यक्रम में उपस्थित थे। उन्होंने कहा, यह कदम हमारी स्वदेशी तकनीकी क्षमता पर मुहर लगाता है जो भारत सरकार के मेक इन इंडिया मिशन को गति देता है। यह हमारे प्रधानमंत्री के आत्मनिर्भर भारत के विजन को बढ़ावा देने की एक और पहल है।



# भारत वाहन परीक्षण के लिए विशेष ईंधन का उत्पादन करने वाले चुनिंदा देशों में शामिल

वैभव न्यूज़ ■ नई दिल्ली

भारत ने वाहनों के परीक्षण में इस्तेमाल होने वाले विशिष्ट ईंधन रेफरेंस पेट्रोल और डीजल का बृहस्पतिवार को उत्पादन शुरू कर दिया। इसके साथ ही भारत इस अत्यधिक विशिष्ट ईंधन का उत्पादन करने वाले चुनिंदा देशों में शामिल हो गया। पेट्रोलियम मंत्री हरदीप सिंह पुरी ने इसे पेश करते हुए कहा कि देश में रेफरेंस ईंधन का उत्पादन शुरू होना आत्मनिर्भर भारत की दिशा में उठाया गया एक और कदम है क्योंकि इससे आयात की जरूरत खत्म हो जाएगी। उच्च क्षमता वाले रेफरेंस ईंधन का इस्तेमाल वाहन विनिर्माता और वाहन जांच एजेंसियां नए मॉडल के परीक्षण के लिए करती हैं। भारत देशकों से इन विशेष ईंधनों की मांग को पूरा करने के लिए आयात पर निर्भर रहा है। लेकिन अब सार्वजनिक क्षेत्र की इंडियन ऑयल कॉरपोरेशन (आईओसी) ने ऐसे उत्पाद विकसित किए हैं जो आयातित उत्पादों की जगह लेंगे। इससे वाहन निर्माताओं और परीक्षण एजेंसियों के लिए बहुत कम लागत पर विश्वसनीय आपूर्ति सुनिश्चित होगी। ओडिशा में आईओसी की पारादीप रिफाइनरी रेफरेंस ग्रेड के पेट्रोल का उत्पादन करेगी जबकि हरियाणा के पानीपत में स्थित इकाई ऐसी गुणवत्ता वाले



डीजल का उत्पादन करेगी। पुरी ने कहा कि पूरी दुनिया में रेफरेंस ईंधन के केवल तीन आपूर्तिकर्ता हैं जिनमें अमेरिकी दिग्गज शेवॉरॉन भी शामिल है। वाहनों का परीक्षण करने के लिए नियमित या प्रीमियम पेट्रोल एवं डीजल की तुलना में उच्च ग्रेड का ईंधन चाहिए। इसमें कई खासियत होती हैं जो सरकारी नियमों के तहत सूचीबद्ध हैं। ऐसे ईंधन को रेफरेंस पेट्रोल या डीजल कहा जाता है। पुरी ने कहा कि घरेलू स्तर पर रेफरेंस ईंधन का उत्पादन करने से लागत में भी फायदा होगा। नियमित पेट्रोल एवं डीजल की कीमत जहाँ 90-96 रुपये प्रति लीटर है वहीं आयातित रेफरेंस ईंधन 800-850 रुपये प्रति लीटर का है। घरेलू स्तर पर इसका उत्पादन करने से इसकी लागत लगभग 450 रुपये प्रति लीटर तक कम हो जाएगी। आईओसी के चेयरमैन एस एम वैद्य

ने कहा कि सरकार के आत्मनिर्भर बनने के उद्देश्य के अनुरूप आईओसी ने भी अपनी रिफाइनरियों में इस विशिष्ट ईंधन का उत्पादन शुरू कर दिया है। पुरी ने कहा कि यह कदम हमारी स्वदेशी तकनीकी शक्ति पर मुहर लगाता है जो भारत सरकार के मेक इन इंडिया मिशन को गति देता है। घरेलू जरूरतों को पूरा करने के बाद आईओसी ईंधन के लिए निर्यात बाजार का भी दोहन करेगी। 20 प्रतिशत एथनॉल मिश्रित पेट्रोल का लक्ष्य 2030 की तय समयसीमा से 2025 कर दिया गया है। उन्होंने कहा, इस महीने हमने 12 प्रतिशत एथनॉल मिश्रण का लक्ष्य हासिल कर लिया गया है और हम कैलेंडर वर्ष 2025 के अंत तक 20 प्रतिशत लक्ष्य की राह पर हैं। 5,000 पेट्रोल पंप पहले से ही 20 प्रतिशत एथनॉल मिश्रित पेट्रोल बेच रहे हैं।

# भारत विशेष ईंधन बनाने वाले चुनिंदा देशों में शामिल

नई दिल्ली, एजेंसी। भारत ने वाहनों के परीक्षण में इस्तेमाल होने वाले विशिष्ट ईंधन रेफरेंस पेट्रोल और डीजल का गुरुवार को उत्पादन शुरू कर दिया। इसके साथ ही भारत इस अत्यधिक विशिष्ट ईंधन का उत्पादन करने वाले चुनिंदा देशों में शामिल हो गया।

पेट्रोलियम मंत्री हरदीप सिंह पुरी ने इसे पेश करते हुए कहा कि देश में रेफरेंस ईंधन का उत्पादन शुरू होना आत्मनिर्भर भारत की दिशा में उठाया गया एक और कदम है क्योंकि इससे आयात की जरूरत खत्म हो जाएगी।

उच्च क्षमता वाले रेफरेंस ईंधन का इस्तेमाल वाहन विनिर्माता और वाहन जांच एजेंसियां नए मॉडल के परीक्षण के लिए करती हैं। भारत दशकों से इन विशेष ईंधनों की मांग को पूरा करने के लिए आयात पर निर्भर रहा है। लेकिन अब सार्वजनिक क्षेत्र की इंडियन ऑयल कॉर्पोरेशन (आईओसी) ने ऐसे उत्पाद विकसित किए हैं जो आयातित उत्पादों की जगह लेंगे। इससे वाहन निर्माताओं और परीक्षण एजेंसियों के लिए बहुत कम लागत पर विश्वसनीय आपूर्ति सुनिश्चित होगी।

ओडिशा में आईओसी की पारादीप रिफाइनरी रेफरेंस ग्रेड के पेट्रोल का उत्पादन करेगी जबकि हरियाणा के पानीपत में स्थित इकाई ऐसी गुणवत्ता वाले डीजल का उत्पादन करेगी।



## फिलहाल दुनिया में केवल तीन आपूर्तिकर्ता

पुरी ने कहा कि दुनिया में रेफरेंस ईंधन के केवल तीन आपूर्तिकर्ता ही हैं जिनमें अमेरिकी दिग्गज शेवॉरॉन भी शामिल है। वाहनों का परीक्षण करने के लिए नियमित पेट्रोल एवं डीजल की तुलना में उच्च ग्रेड का ईंधन चाहिए। नियमित पेट्रोल एवं डीजल की कीमत जहां 90-96 रुपये प्रति लीटर है वहीं आयातित रेफरेंस ईंधन 800-850 रुपये प्रति लीटर का है। घरेलू उत्पादन से इसकी लागत लगभग 450 रुपये प्रति लीटर तक कम हो जाएगी।

आईओसी के चेयरमैन एस एम वैद्य ने कहा कि सरकार के आत्मनिर्भर बनने के उद्देश्य के अनुरूप आईओसी ने भी अपनी रिफाइनरियों में इस विशिष्ट ईंधन का उत्पादन शुरू कर दिया है। पुरी ने कहा कि यह कदम ह्यहमारी स्वदेशी तकनीकी शक्ति पर मुहर लगाता है जो भारत सरकार के मेक इन इंडिया मिशन को गति देता है।





## विशेष ईंधन का उत्पादन करने वाले चुनिंदा देशों में शामिल हुआ भारत

नई दिल्ली (भाषा)।

भारत ने वाहनों के परीक्षण में इस्तेमाल होने वाले विशिष्ट ईंधन 'रेफरेंस' पेट्रोल और डीजल का वृहस्पतिवार को उत्पादन शुरू कर दिया। इसके साथ ही भारत इस अत्यधिक विशिष्ट ईंधन का उत्पादन करने वाले चुनिंदा देशों में शामिल हो गया।

पेट्रोलियम मंत्री हरदीप सिंह पुरी ने इसे पेश करते हुए कहा कि देश में 'रेफरेंस' ईंधन का उत्पादन शुरू होना आत्मनिर्भर भारत की दिशा में उठाया गया एक और कदम है क्योंकि इससे आयात की जरूरत खत्म हो जाएगी। उच्च क्षमता वाले रेफरेंस ईंधन का इस्तेमाल वाहन विनिर्माता और वाहन जांच एजेंसियां नए माडल के परीक्षण के लिए करती हैं। भारत दशकों से इन विशेष ईंधनों की मांग को पूरा करने के लिए आयात पर निर्भर रहा है। लेकिन अब सार्वजनिक क्षेत्र की इंडियन ऑयल कॉरपोरेशन (आईओसी) ने ऐसे उत्पाद विकसित किए हैं जो आयातित उत्पादों की जगह लेंगे।